a malted cereal as recited in claim wherein the cereal, water and activated spores are combined to form a combination and where the concentration of the activated spores and the combination is held together for a time and temperature which are effective for providing the malted cereal with an enzyme activity which is greater than the enzyme activity which is obtained by a [matter] malting process without activated spores.

7. (Once Amended) A process as recited in claim 6 wherein <u>prior to drying</u>, the combination is held until the cereal has a moisture content of between about 20 to about 60 weight percent and <u>the cereal</u> has germinated for about 2 to about 7 days at a temperature of from about 10 to about 30°C.

8. (Once Amended) A process as recited in claim 6 wherein <u>prior to drying</u>, the combination is held until the cereal has a moisture content of between about 20 to about 60 weight percent and <u>the cereal</u> has germinated for about 2 to about 7 days at a temperature of from about 10 to about 30°C. and <u>thereafter</u> is dried to a moisture content of from about 2 to about 15 weight percent.

of malted cereal[s] comprising:[, wherein the]

steeping the cereal, the steeping including [step includes] one or more wetting stages at a temperature between about 5° to [and] about 30°C, [preferably between 10° and 20°C, until the] the wetting stages effective for providing a material [has] having a moisture content between about 20% and about 60% by weight; [, preferably between 38% and 47%, wherein after a germination period between]

days[, preferably between 3 to 6 days] at a temperature between about 10° to [and] about 30°C, [preferably between 14° and 18°C,] to provide a germinated cereal;

adding activated spores from microbes selected from the group consisting of bacteria, fungi, and mixtures thereof

2

to the cereal prior to or during the steeping or the germinating of the cereal;

[are preferably kilned by increasing the temperature to values between] temperature of from about 40° to [and] about 150°C until the steeped and germinated cereal [material] has a moisture content between about 2% to [and] about 15% by weight[, and wherein one or more microbial cultures selected from the group consisting of one or more bacteria and/or one of more fungi are added in one or more times either before or during or after the malting process of said cereals].

sub co>

E9. (Once Amended) The process according to claim 27, for the preparation of malted barley wherein the fungi are selected from the group consisting of [(geners as described by Ainsworth and Bisby's dictionary of the fungi, 8th edition, 1995, edited by D.L. Hawksworth, P.M. Kirk, B.C. Sutton, and D.N. Pegler (632 pp) Cab International) comprising] Ascomycota, [preferentially] Dothideales, [preferentially] Mycosphaerellaceae_ [preferentially] Mycosphaerella spp., Venturiaceae, [preferentially] Venturia spp.; Eurotiales, [preferentially] Monascaceae_ [preferentially] Monascus spp., Trichocomaceae, [preferentially] Emericilla spp., Duroteum spp., Eupencillium spp., Neosartorya spp., Talaromyces spp._[;] Hypocreales [preferentially] Hypocreceae_ [preferentially] Hypocrea spp._[;] Saccharomycetales_ [preferentially] Dipodascaceae_ [preferentially] Dipodascus spp., Galactomyces spp\, Endomycetaceae_ [preferentially] Endomyces spp., Metschnikowiaceae, [preferentially] Guilliermondella spp., Saccharomycetaceae [preferentially] Debaryomyces spp., Dekkera spp., Pichia spp., Kluyveromyces spp., Saccharomyces spp., \(\text{Torulaspora spp., Zygosacchaaromyces} \) spp., Saccharomycodaceae, [preferentially] Hansenlaspora spp._[;] Schizosaccharomycetales_ [preferentially] Schizosacchromycetaceae_ [pre/ferentially] Schizosaccharomyces spp._[;] Sordariales_ [preferentially] Chaetomiaceae_ [preferentially] Chaetomium spp\, Sordariaceae_ [preferentially] Neurospora spp. λ [;] Zygomycota,

120874

Ship Co>

[preferentially] Mucorales, [preferentially] Mucoraceae, [preferentially] Absidia spp., Amylomyces spp., Rhizomucor spp., Actinomucor spp., Thermomucor spp., Chiamydomucor spp., Mucor spp., [preferentially] Muco circinelloides, Mucor grisecyanus, Mucor hiemalls, Mucor Indicus, Mucor mucedo, Mucor pirtformis, Mucor plumbeus, Mucor praini, Mucor pusillus, Mucor silvaticus, Mucor javanicus, Mucor racemosus, Mucor roux anus, Mucor rouxli, Mucor aromatiacus, Mucor flavus, Mucor miehel, Rhizopus spp., [preferentially] Rhizopus arrhizus, Rhizopus oligosporus, Rhizopus oryzae, [preferentially] strains ATCC 4858, ATCC 9363, NRRL 1891, NRRL 1472, Rhizopus stolonifer, Rhizopus thailandensis, Rhizopus formosaensis, Rhizopus chinensis, Rhizopus cohnil, Rhizopus japonicus, Rhizopus nodosus, Rhizopus delemar, Rhizopus acetorinus, Rhizopus chlamydosporus, Rhizopus circinans, Rhizopus javanicus, Rhizopus peka, Rhizopus salto, Rhizopus tritiel, Rhizopus \niveus, Rhizopus microsporus_[;] Mitosporic fungi preferentially Aureobasidium spp., Acremonium spp., Cercospora spp., Epicoccum spp., Monilla spp., [preferentially] Monilla candida, Monilla sitophilia, Mycoderma spp., Candida spp., [preferentially] Candida diddensiae, Candida edax, Candida etchellel, Candida kefir, Candida krisei, Candida lactosa, Candida lambica, Candida mellnil, Candida utilis Candida milleri, Candida mycoderma, Candida parapsilosis, Candida obtux, Candida tropicalls, Candida valida, Candida versatilis, Candida guilliermondil, Rhodotorula spp., Torulopsis spp., Geotrichum spp., [preferentially] Geotrichum amycelium, Geotrichum armillariae, Geotrichum asteroides, Geot\richum bipunctatum, Geotrichum dulcitum, Geotrichum eriense, Geotrichum fici, Geotrichum flavo-brunneum, Geotrichum fagrans, Geotrichum gracile, Geotrichum heritum, Geotrichum kiebaknil, Geotrichum penicillatum, Geotrichum hirtum, Geotrichum pseudocandidum, Geotrichum rectangulatum, Geotrichum suaveolens, Geotrichum vanrylae, Geotrichum loubieri, Geotrichum microsporum, Cladosporfum spp., Trichoderma spp., [preferentially] Trichoderma hamatum, Trichoderma harzianum, Trichoderma koningli, Trichoderma pseudokoningal, Trichoderma reesei,

193

Sub clos

b⁵

Trichoderma virgatum, Trichoderma viride, Oidium spp., Alternaria spp., [preferentially] Alternaria alternata, Alternaria tenuls, Helminthosporium spp., [preferentially] Heiminthosporium gramineum, Helminthosporium sativum, Helminthosporium teres, Aspergillus spp._ [as described by R.A. Samson ((1994) in Biotechnological handbooks, Volume 7:Aspergilus \ edited by Smith, J.E. (273 pp), Plenum Press) preferentially Aspergillus ochraseus Group [(Thom & Church)], Aspergillus nidulans Group [(Thom & Church)], Aspergillus versicolor Group \[(Thom & Church)], Aspergillus wentil Group [(Thom & Raper)], Aspergillus candidus Group [(Thom & Raper)], Aspergillus flavus &roup [(Raper & Fennell)], Aspergillus niger Group [(Thom & Church)], Penicillum spp., [preferentially] Penicillum aculeatum, Penicillum citrinum, Penicillum claviforme, Penicillum funiculosum, Penicillum Italicum, Penicillum lanoso-viride, Penicillum emersonil, Penicillum lilacinum, and Penicillum expansum.

Sub (C6)

0.6

3/1. (Once Amended) A [P]process according to claim 27 for the preparation of malted cereals other than malted barley wherein the fungi are selected from the group consisting of \[comprising] Ascomycota_ [preferentially] Dothideales, [preferentially] Mycosphaerellaceae, [preferentially]\ Mycosphaerella spp., Venturiaceae_ [preferentially] \Venturia spps._[;] Eurotiales_ [preferentially] Monascaceae, [preferentially] Monascus spp., Trichocomaceae, [preferentially] Emercilla spp., Euroteum spp., Eupencillium spp., Neosartorya spp., Talaromyces spp._[;] Hypocreales [preferentially] Hypocreceae_ [preferentialy] Hypodrea spp._[;] Saccharomycetales_ [preferentially] Dipodascaceae_ [preferentially] Dipodascus spp., Galactomyces spp.\, Endomycetaceae_ [preferentially] Endomyces spp., Metschn\(\frac{1}{2}\)kowiaceae\(\frac{1}{2}\) [preferentially] Guilliermondella spp., Saccharomycetaceae, [preferentially] Debaryomyces spp., Dekkera spp., Pichia spp., Klyveromyces spp., Sacchaaromyces spp., \Torulaspora spp., Zygosaccharomyces spp., Sacchaaromycodaceae, [preferentially] Hansenlaspora spp._[;] Schizosaccharomycetales_ [preferentially]

Sub Clb>

Schizosaccharomycetaceae_ [preferentially] Schizosaccharomyces spp._i;] Sordariales_ [preferentially] Chaetomiaceae_ [preferentially] Chaetomium spp., Sordariscese_ [preferentially] Neurospora spp._; Zygomycota_ [preferentially] Mucorales_ [preferentially] Mucoraceae_ [preferentially] Absidia spp., Amylomyces spp., Rhizomucor spp., Actinomucor spp., Thermomucor spp., Chiamydomucor spp., Mucor spp., Rhizopus spp._[;] Mitosporic fungi_ [preferentially] Aureobasidum spp., Acremonium spp., Cerocospora spp. Epicoccum spp., Monilla spp., Mycoderma spp., Candida spp., Rhodotorula spp., Torulopsis spp., Geotrichum spp., Cladosporium spp., Trichoderma spp., Oidium spp., Alternara spp., Helminthosporium spp., Aspergillus spp., and Penicillium spp.

32. (Once Amended) A [P]process according to [any of] claim[s] 27, 28, 29, 30 or [to] 31, wherein the cereal is submersed in water and a [the] total time of submersion in the water during steeping [for physiological reasons] does not exceed about 30 hours, [preferentially takes 10 to 25 hours, or] and wherein the drying [kilning includes] is at more than two temperatures [steps] and wherein the activated spores [microbial sulture] are from microbes selected from the group consisting of [comprises] Rhizopus spp., [and/or] Pseudomonas spp. and mixtures thereof.

Sub col

33 (Once Amended) A [P]process according to the claim 32, wherein the Rhizopus spp. is [preferably a] Rhizopus oryzae [such as a Rhizopus oryzae strain ATCC 9363].

34. (Once Amended) \underline{A} [P]process according to [the] claim 31 [or claim 32], wherein the Pseudomonas sp. is [preferably a] Pseudomonas herbicola.

35. (Once Amended) A [P]process according to [any of] claim[s] 27 [to 35], wherein the [microbial] activated spores [used] are activated by [one or a combination of the following] treatments selected from the group consisting of [: